

25X1

CONFIDENTIAL/SECURITY INFORMATION

-2-

day period during which the locomotive is laid up for inspection and miscellaneous small repairs. Taking into consideration also a period of capital maintenance which takes place every five years and which is approximately three months in duration, we can arrive at the following: Each year there is approximately one half month lost through capital maintenance, then adding the 35 days a year for the monthly inspection periods, we have a figure of 51 days operating time which is lost. The 51 days a year from 365 gives a total operating time of 314 days per year. At an average daily run of 150 kilometers, a total figure of 47,100 kms is arrived at for the yearly run of a locomotive.

3. Q. At the locomotive division point [] how many locomotives were there of each type (freight, passenger, switching)?

A. [] in the Kiev system [] engines were generally divided into two classes: passenger and freight. Old, obsolete engines that were not going to haul passengers or freight were used for switching. There were also small Diesel engines, but these were very scarce. []

the Ukraine in 1943 there were the following classes of locomotives:

FREIGHT

SU	Old, obsolete passenger locomotives used for freight. Built prior to 1917
SA	" " " " " "
AB	" " " " " "
IS	(Iosef Stalin) - built around 1936 or 1937, one of the first streamlined freight models. The maximum speed was 110 kms per hour; the working speed was about 80 kms.
M	(believed to be named for Molotov) built about 1936 or 1937, one of the first streamlined models
KV	(Klementiy Voroshilov) built approximately 1930 or 1935

PASSENGER

OV	Old pre-revolution model (built between 1910 and 1916 originally) but still in production
OD	" " " " " "
SHCH	" " " " " "
E CH	(not known for whom named) built between 1910 and 1916 originally, but still in production
FD	(Feliks Dzerzhinskiy - former NKVD head), most modern locomotive, 1936-1937 model.

In 1939 or 1940 there was published in the USSR a Railway Guidance Book which gave the types and speeds and power of the various locomotives. [] these figures [] fairly accurate. Undoubtedly a copy of this book could be found at the Library of Congress.

4. Q. Of these locomotives (or of any one type), how many were (a) operating on the line, (b) waiting ready to go out on a run, (c) in reserve in operable condition, (d) under repair or awaiting repair? This information should be given for an average day, and also the average of any one time.

A. There were no set figures [] they depended entirely upon seasonal demand or emergency operations. []

5. Q. On the average, how long were locomotives out of service for the various classes of repair?

A. [] locomotives were laid up approximately three days a month for general inspection and miscellaneous repairs of a small nature, and approximately

CONFIDENTIAL/SECURITY INFORMATION

CONFIDENTIAL/SECURITY INFORMATION

-3-

three months every five years for capital maintenance. Figuring each on the basis of 100% for maximum operating efficiency, one can arrive at the following? Since there is one half month lost each year due to capital maintenance and three days a month or 36 days a year for general inspection, this means that every year approximately 10% of the time was lost for the general three day inspection and five days for capital maintenance, or a total of 15%. Added to this is approximately 25% due to stand-by time which gives a total of 40% in which the locomotive is inoperative. Therefore, each locomotive is, roughly, operating but 60% of the time.

6. Q. From the time a locomotive reached the end of a run to the time it started on the return run, what was the average elapsed time?
- A. One to three hours, depending on the amount of time taken for refueling, rewatering, and waiting for a new load to be made up.
7. Q. On the average, how long did it take from the time a crew was called to the time the train left on its run?
- A. A crew was always on call for freight duty. However, in the case of passenger trains, a rigid schedule was maintained for the crew. From the time a crew was called to duty until the time the train left on its run was approximately one to one and one half hours (this includes an average of 30 minutes allowed for the crew to travel to the depot).
8. Q. On the average, how long did it take to refuel and water a locomotive during a run?
- A. The major stations with good equipment could handle refueling and rewatering in approximately 10 to 15 minutes. Small stations where there was inefficient or old equipment, or where it was necessary to do the job manually, took anywhere from 30 to 45 minutes.

there are certain long distance freight runs where one locomotive only is used. An example of this would be the case of a large shipment of a certain type of product loaded at one depot and consigned in whole to another depot a long distance away. In such cases two or possibly three crews are aboard the train. Short stops are made only for refueling and watering. An example of the type of load hauled in such cases would be coal, construction equipment, or during the peak harvest season, certain agricultural products. The stops made on such a run for refueling and watering are usually at the end of the average leg, or approximately 75 to 100 kms.

-and-

CONFIDENTIAL/SECURITY INFORMATION